

**DIRECTORATE OF DISTANCE EDUCATION
NALSAR UNIVERSITY OF LAW, HYDERABAD**

**P.G.DIPLOMA IN PATENTS LAW
2019-20**

Take Home - Annual Exams (August, 2020)

**Paper II – Practical
(Exploitation of Patents – Drafting, Specification & Patent Writing)**

Time: Submit as notified.

TOTAL MARKS: 100

INSTRUCTIONS TO CANDIDATES

- 1. Please mention your name, ID No. and Subject name on the Answer Sheet.**
- 2. Only typewritten answers will be accepted.**
- 3. The question paper to be interpreted as given and no additional clarification can be sought.**
- 4. Attempt only one choice – either A or B**
- 5. Cut and paste of any material either from reading material or from internet will result in rejection of answer-sheet, which means a failure with zero marks. No plagiarism.**
- 6. If the answers of two students are similar, it will be presumed that both the students consulted each other and two answer sheets will be cancelled.**

You are required to draft a complete specification containing; a.) Title of the Patent b.) Background of the Invention c.) Summary of the Invention d.) Claims e.) Abstract of the invention. (Do not write a detailed description or draw figures.)

The Claims in the patent draft carries 50 marks and remaining specification carries 50 marks.

Option A

Ms. Ayla has developed an anti-suicide article of clothing that is comfortable to wear, yet prevents a user from using the article to commit suicide. The proposed invention provides a comfortable article of clothing that can be worn by inmates and medical patients, wherein there is a danger of suicide or self-injury by such persons. In prisons and jails there is always a percentage of inmates that need to be kept isolated from other inmates for a variety of reasons such as punishment for certain types of crimes, bad behaviour, contagious illness, the tendency to fight with other inmates, etc. Similarly, patients of mental health facilities may be dangerous to themselves and other patients or the facility staff and need to be kept in

isolation for extended periods of time. In these scenarios, there exists the possibility that inmates and patients, respectively, may have severe anxiety, depression, or even suicidal tendencies. In an effort to prevent a user (e.g., inmate, patient, etc.) from using his clothing to hang himself, the users are issued special protective clothing (e.g., clothing that is tear resistant). A current fabric used to manufacture protective clothing consists of a high strength nylon shell sewn together with nylon thread. Accordingly, there is a need for an anti-suicide article of clothing that overcomes the aforementioned drawback, that is comfortable to wear, and cannot be used to commit suicide.

The present invention provides a comfortable article of clothing that can be worn by inmates and medical patients, wherein there is a danger of suicide or self-injury by such persons. The article of clothing is comprised of a high-strength fabric consisting of an outer layer of tear-proof, high strength natural or synthetic material and an inner layer of soft natural or synthetic material. Between the inner and outer layers of material is sandwiched a third layer of insulating material to provide warmth and additional bulk to the fabric. The three materials are joined together with a nylon thread stitched in a pattern. The present invention, the article of clothing is a smock. The smock provides strength, warmth and comfort for suicidal inmates and patients. The smock further comprises at least one sleeve section that is removably attached to a torso section, wherein at least one sleeve section breaks away or detaches from the torso section at least in part when a user pulls at least one sleeve section away from the torso section. For example, at least one sleeve section can be completely removed from the torso section when a user pulls the at least one sleeve section away from the torso section. In the present invention, the at least one sleeve section only partially breaks away (or detaches) from the torso section.

FIG. 1 is a front perspective view of an anti-suicide smock with break-away sleeves in accordance with one embodiment of the present invention, when viewed from the front.

FIG. 2 is a side perspective view of a multi-layered swatch of fabric used to construct the smock illustrated in FIG. 1 in accordance with one embodiment of the present invention.

FIG. 3 is a front perspective view of an article of clothing for suicide prevention in the form of an undergarment in accordance with one embodiment of the present invention.

FIG. 4 is top perspective view of an article of clothing for suicide prevention in the form of an adult diaper in the open position in accordance with one embodiment of the present invention.

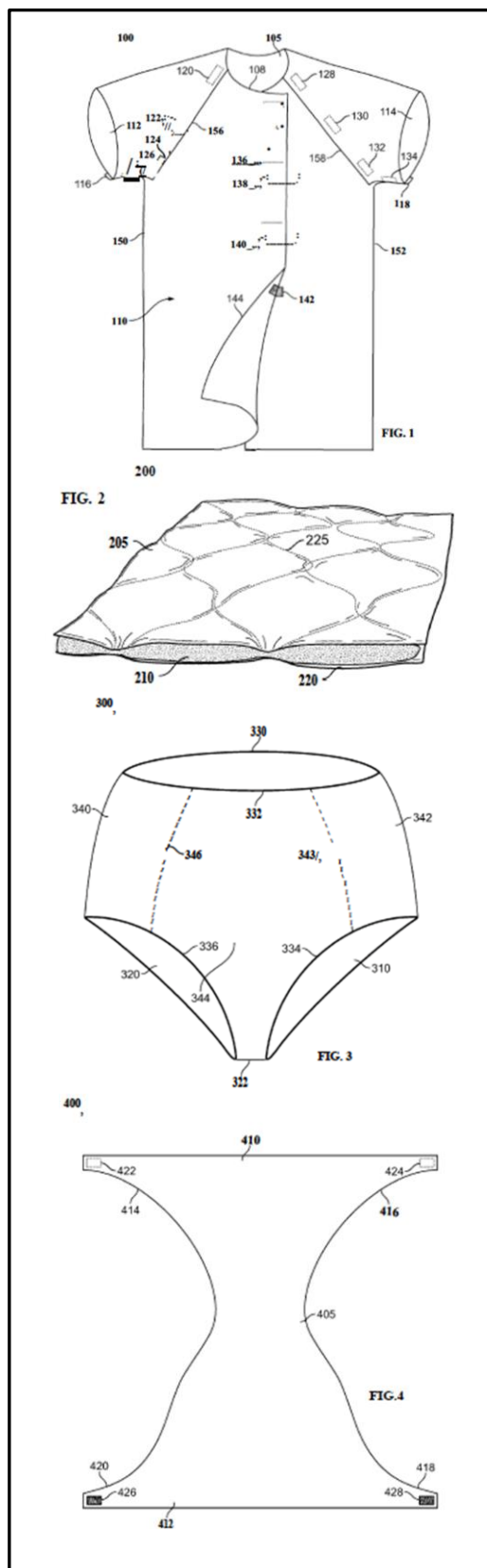


FIG. 1 is a front perspective view of an anti-suicide smock 100 with break-away sleeves or sleeve sections 112 and 114 in accordance with the present invention, when viewed from the front. The smock 100 provides warmth and dignity to a user and can easily be manufactured in different sizes to fit users of differing heights and girth. The smock 100 is comprised of a torso section 110 that covers at least a portion of a torso of a user, at least one sleeve section 112 or 114, and a plurality of interlocking removable fastener devices 120-142.

The removable fastener devices 120-142 serve several purposes. First, the removable fastener devices 136-142 that are placed along the torso flap 144 connect the left portion 150 to the right portion 152. Second, the removable fastener devices 120-124 connect the sleeve flap 156 to the left portion 150 and similarly, the removable fastener devices 128-132 connect the sleeve flap 158 to the right portion 152. The removable fastener device 126 connects the sleeve flap 116 attached to a front portion of the sleeve section 112 to a back portion of the sleeve section 112. Similarly, the removable fastener device 134 connects the sleeve flap 118 attached to a front portion of the sleeve section 114 to a back portion of the sleeve section 114. A key use of the plurality of interlocking removable fastening devices 120-142 versus having a single removable fastening device along the entire length of each removably attached portion of the smock 100 is to prevent the user from separating such a relatively long removable fastening device from the smock 100 and fashioning the removable fastening device into a rope or a noose to hang himself. For example, if removable fastening devices 128, 130, and 132 were combined into one long fastening device (not shown) to effectively join the entire first portion of the sleeve flap 158 to the right portion 152, the user could possibly tear away the one long fastening device from the first portion of the sleeve flap 158 and use the device to construct a rope or a noose.

Another key use of devices 120-134, however, is to provide break-away sleeve functionality to prevent the user from forcing his head into the sleeve section 112 or 114 in an attempt to hang himself. Other anti-suicide smocks in existence specifically do not have sleeves (let alone break-away sleeves) to prevent the user from attempting to injure himself in this manner. More specifically, if existing anti-suicide smocks had large diameter rigidly attached sleeves, the user could attempt to hang himself with such a smock by tying a portion of such a smock to a relatively fixed or heavy article of furniture or a sturdy fixture in the user's cell or room, putting his head in one of the sleeve openings, and using his own body weight to hang himself. The break-away sleeve sections 112 and 114 of the present invention prevent the user from hanging himself in such a manner. That is, the sleeve sections 112 and 114 can partially break-away from the left portion 150 and the right portion 152, respectively.

Similarly, if the user attempts to push his head into either of the open ends of the sleeve sections 112 or 114 that are distal from the torso section 110, removable fastener devices 126 and 134, respectively, will release a second portion of the sleeve flaps 156 and 158. As the user proceeds to push his head deeper into the opening in the sleeve sections 112 or 114, additional removable fastener devices 120-124 and 128-132, respectively, will release the first portions of the sleeve flaps 156 and 158. The sleeve sections 112 and 114 are illustrated as being relatively short, like a short-sleeve t-shirt, to prevent the user from tying the sleeves 112 and 114 together to form a rope that can be used to injure or kill the user. One of skill in the art will appreciate that the sleeve sections 112 and 114 can also comprise longer length sleeves.

In some cases, the removable fastener devices 120-142 are comprised of hook-and-loop fasteners (e.g., VelcroTM fasteners, licensed or manufactured by Velcro Industries B.V. Ltd.

Liability Co., Netherlands). Hook-and-loop-type fastener systems are comprised of a pair of complementary surfaces, generally available in strip or pad form. One of the strips or pads is provided with a hooked surface, and the mated strip or pad is provided with a looped surface. Once the complementary strips or pads are placed in mated juxtaposition and a light pressure is applied, they form a mechanical bond and provide a strong, semi-permanent closure which may be opened by removing, in sequence, a small portion of the hook and loop bond, preserving the system for reuse. One of skill in the art will appreciate that other types of removable fastener devices 120-142 such as the use of snap fasteners that are comprised of a pair of interlocking discs or the use of buttons and opposing buttonholes or reinforced slits that utilize thin breakable thread are also within the spirit and scope of the present invention.

FIG. 2 is a side perspective view of a multi-layered swatch of fabric 200 used to construct the smock 100 in accordance with the present invention. The fabric 200 is similar to a quilt. The fabric 200 is comprised of an outer layer 205, a middle layer 210, an inner layer 220, and thread 225 that holds together the outer layer 205, the middle layer 210, and the inner layer 220. The outer layer 205 is comprised of highly tear-resistant woven materials like polyester or nylon.

The outer layer 205 can also be comprised of other materials such as those commonly used to construct parachutes and can include a low-stretch DacronTM or zero-stretch SpectraTM, KevlarTM, VectranTM, as well as high-modulus aramids. The tear-resistant property of the outer layer 205 prevents the user from tearing the outer layer 205 into strips and using the strips to construct a rope for committing suicide.

The inner layer 220, the middle layer 210, and the outer layer 205 are fastened together by the thread 225. The thread 225 is sewn into a pattern that for ease of manufacturing repeats and can form a multitude of particular shapes and patterns. Perhaps one of the easier to manufacture patterns is the diamond-like pattern illustrated in FIG. 2, though of course other such patterns as squares or rectangles can be utilized as well. Further, the size of each recurring pattern section (e.g., the dimensions of each diamond) can vary. To provide durability and washability by commercial laundering methods, as well as to prevent the user from being able to tear apart the fabric 200, a fairly heavy nylon thread of greater than 33 denier is utilized.

FIG. 3 is a front perspective view of an article of clothing for suicide prevention in the form of an undergarment 300 in accordance with the present invention. The undergarment 300 is comprised of a crotch portion 344, a left portion 340, a right portion 342, and a plurality of opening that comprise torso opening 330 and leg opening 320 and 310.

While conventional undergarments are comprised of natural or synthetic material such as cotton and can be laundered and re-used, the undergarment 300 is comprised of a thin, easily tearable, non-woven synthetic or natural material such as cellulose. The body of the undergarment 300 can be made of a single layer of material or may be comprised of a plurality of layers in strategic areas such as the crotch portion 344 to prevent leakage. One of the physical properties of the undergarment 300 that is comprised of a single layer of non-woven cellulose material is that the material is relatively weak, thereby allowing the user to tear the undergarment 300 into strips and to use the strips to construct a rope or noose, but preventing the user from using the rope to commit suicide, since such a rope will tear when tensile stress is applied by the user.

Thread can be utilized for stitching to form the material into the shape of the undergarment 300 that can cover a portion of the body of the user, though the undergarment 300 can have different shapes to accommodate users of differing size and weight.

The edges of the undergarment 300 surrounding the plurality of openings 330, 320, and 310 are comprised of a single elastic thread attached to the non-woven material at each of openings 330, 320, and 310. The single elastic thread at openings 330, 320, and 310 is fashioned into elastic edges 332, 336, and 334, respectively. Elastic edges 332, 336, and 334 prevent the non-woven material from falling off the appropriate portions of the body in contact with the undergarment 300 (i.e., the waist area and the tops of the user's legs). The elastic edges 336 and 334 also form a loose seal against the user's upper legs that help to prevent any leakage that might otherwise occur from an accidental urination or bowel movement for a short period of time. Unlike conventional undergarments, the elastic edges 332, 336, and 334 are very thin and small and the undergarment 300 does not have a waistband in the conventional sense. This serves to prevent the user from tearing the elastic edges 336, 334, and 332 away from the undergarment 300 and fashioning them into a rope with sufficient tensile strength for the user to form a noose or asphyxiate himself using the single elastic thread that comprises the elastic edges 336, 334, and 332. One of skill in the art will recognize that the elastic edges 336, 334, and 332 can be comprised of a variety of types of elastomeric material other than natural or synthetic rubber.

FIG. 4 is top perspective view of an article of clothing for suicide prevention in the form of an adult diaper 400 in the open position in accordance with the present invention. The diaper 400 is comprised of a body 405, a front section 410, and a rear section 412. Conventional diapers are primarily worn for incontinence reasons and/or uncontrollable bowels and are comprised of thick absorbent materials. The purpose of a conventional diaper is to absorb moisture and contain mess so that the user can remain dry and comfortable after wetting or soiling himself through a bowel movement or urination. Conventional diapers include cloth diapers that are comprised of layers of fabric such as terry toweling and can be washed and reused multiple times, as well as disposable diapers that contain absorbent chemicals and can be thrown away after use. Often, to avoid leakage of liquid or solid waste, plastic pants or other forms of diaper covers are worn externally over the conventional diaper by the user. In contrast, the diaper 400 is intended to be worn by a user that is capable of utilizing a toilet or restroom and does not require the bulk, level of absorbency and anti-leakage properties of the conventional diaper or plastic pants.

The body 405 is comprised of a thin, easily tearable, non-woven synthetic or natural material such as cellulose. The body 405 can be made of a single layer of material or may be comprised of a plurality of layers in strategic areas such as the crotch area to prevent leakage. One of the physical properties of the diaper 400 that is comprised of a single layer of non-woven cellulose material is that the material being relatively weak, allows the user to tear the diaper 400 into strips and to use the strips to construct a rope or noose, but prevents the user from using the rope to commit suicide, since such a rope will tear when tensile stress is applied by the user.

Thread may be utilized for stitching to form the material into the shape of the body 405 that can cover a portion of the body of the user, though the body 405 can from different shapes to accommodate users of differing size and weight. In order to enable the diaper 400 to be worn around the portion of the body of the user, the diaper 400 contains a plurality of interlocking removable attachment devices affixed to front corners 414 and 416 with opposing interlocking components affixed to rear corners 420 and 418, respectively. The removable

fastener devices 422-428 each are comprised of at least two of a plurality of interlocking components that are placed on opposing sides of the front corner 414 and the rear corner 420 and the front corner 416 and the rear corner 418, respectively. The removable fastening devices can be comprised of hook-and-loop fasteners (e.g., Velcro™), snaps, tape, stiff foldable tabs, or the like.

Option B

John has developed a frameless glassware assembly attaching to boy piercing studs or similar structures attached to the human boy. The design consists of an elastomeric C-clip fixedly attached to one distal end of a metal arm, which is attached to a frameless glass lens assembly. This design allows for frameless eyeglass attachment to eyebrow studs, the nose studs of a user, or similar structure via one or more elastomeric C-clips. These designs are frameless and avoid side wire or similar earpieces common to hold glassware to the face of a user.

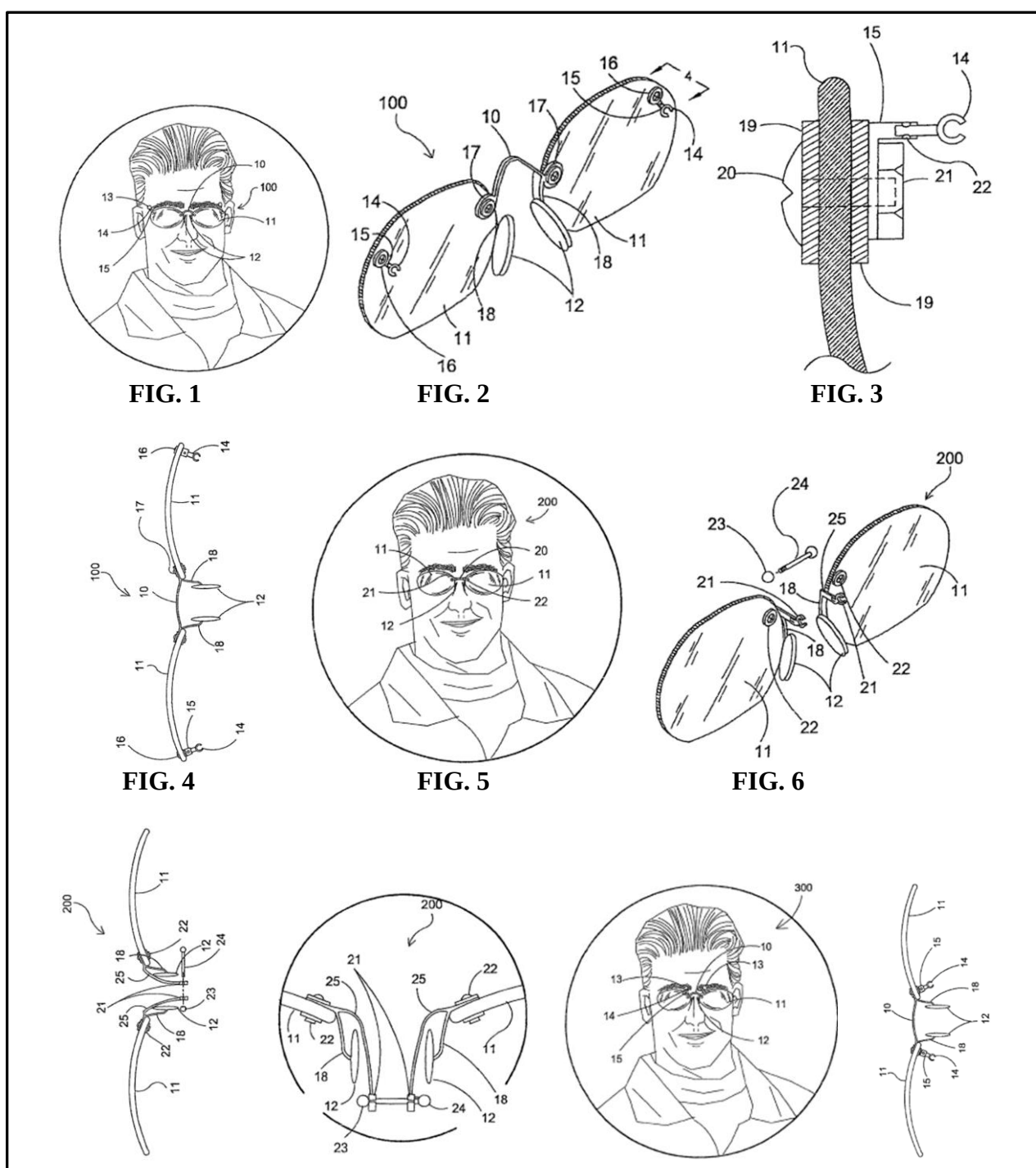


FIG. 1 is a close up illustrative view of the GES design in use.

FIG. 2 is a top perspective view of the GES design.

FIG. 3 is a sectional end view of the GES design showing the eyebrow stud attachment end of the GES.

FIG. 4 is a top view of the GES design.

FIG. 5 is a front view of the GNB design attached to an individual for use with a pierced nose bridge, an alternative embodiment of the present invention.

FIG. 6 is a top perspective view of the GNB design, an alternate embodiment of the present invention, for attachment to a pierced nose bridge stud.

FIG. 7 is a top view of the GNB design, an alternate embodiment of the present invention, for attachment to a pierced nose bridge stud.

FIG. 8 is a detailed close up top view of the GNB design, an alternate embodiment of the present invention, for attachment to a pierced nose bridge stud.

With regard to the reference numerals used, the following numbering is used throughout the various drawing figures.

100 glass to eyebrow stud (GES) design
200 glass to nose bridge (GNB) design
300 glass to close eyebrow stud (GCES) design:

10 bridge
11 lens
12 nose rest
13 eyebrow stud
14 flexible rubber clip insert
15 metal arm
16 metal arm attach assembly
17 bridge attach assembly
18 bridge extension arms
19 washer
20 screw
21 nut
22 metal arm internal dimple
23 nose stud screw
24 pierced nose bridge stud
25 short bridge

FIG. 9 is an alternative view of the glass to close eyebrow stud (GCES) design, an alternate embodiment of the GES design, shown in use and attached to eyebrow studs, which are closer to the center face.

FIG. 10 is a top view of the GCES design, alternate embodiment of the GES design for attachment to dual eyebrow studs, which are closer to the center face.

The present invention comprises frameless eyeglasses having attachment members that attach the frameless eyeglasses to an eyebrow stud, nose bridge stud, or similar structure secured attached to the human body.

FIG. 1 is a close up illustrative view of GES 100 in use. GES 100 is designed to attach to pierced eyebrow studs. Each lens 11 is attached to bridge 10 via a screw 20, washers 19, and nut 21 (or other means). Nose rests 12 are attached to leg extensions of bridge 10 and supply comfort in user wear. Metal arm 15 is attached at each end of each outer lens 11 via a screw 20, two washers 19, and a nut 21 (see FIG. 3 for detail). It should be noted that the attachment of metal arm 15 to lens 11 could be accomplished by means other than a screw 20/nut 21 combination. For example, a rivet or other means could accomplish the same functional result. Flexible rubber clip insert 14 has an elastomeric C-shaped tip fixedly attached to one distal end for attachment to eyebrow stud 13. Further detail will be illustrated in FIGS. 2 and 3.

FIG. 2 is a top perspective view of GES 100 design for attachment to user eyebrow pierced studs. GES 100 attaches to the eyebrow stud (not shown) via flexible rubber (elastomeric) C-clips 14 which are fixedly attached to each distal end of each metal arm 15. Each metal arm 15 is attached to each frameless lens 11 by means of metal arm attach assemble 16 which consist of a treaded bolt, two washers 19, and a nut 21. Bridge 10 attaches to each lens 11 via

a bridge attach assembly 17, which is similar to metal arm attach assembly 16 (threaded bolt, two washers, and a nut). Bridge 10 employs bridge extension arms 18 on each side to accommodate nose rest 12 attachments. It should be noted that lens 11 could be made of various materials and can be prescription or non-prescription type lens. Lens 11 could be of various shades for sun protection, eye safety protection, night driving, etc.

FIG. 3 is a sectional end view of GES 100 design showing the eyebrow stud attachment end of the GES 100. Shown is frameless lens 11 attachment to metal arm 15 by means of screw 20, and washer 19 on each side of lens 11, and fastening nut 21. Flexible rubber clip insert 14 attaches to one distal end metal arm 15. Metal arm 15 employs metal arm internal dimple 22 to hold flexible rubber clip insert 14 in place. Flexible rubber clip insert 14 attaches to an eyebrow stud (not shown) via its elastomeric C-shaped tip fixedly attached to one distal end. It should be noted that the assembly of metal arm 15 to lens 11 could be accomplished by alternate means (not shown) such as a rivet or compression type pin, etc.

FIG. 4 is a top view of the GES 100 design. Shown are the frameless glass lenses 11, that attach to a user's pierced eyebrow studs by means of flexible elastomeric C-clip 14, which is fixedly positioned to distal end of each metal arm 15. Metal arm 15 is attached to the frameless glass lens 11 by means of metal arm attach assembly 16 which consists of a threaded bolt, two washers 19, and a nut 21. Also shown in FIG. 5 top view is bridge 10 with bridge extension arms 18 to attach nose rest 12. Bridge 10 assembles to each lens 11 by means of bridge attach assembly 17.

FIG. 5 is a front view of the GNB 200 design attached to an individual for use with a pierced nose bridge stud 24, an alternate embodiment of the present invention. Shown is each frameless glass lens 11, flexible rubber clip 14, flexible rubber clip assembly 22, which consists of a screw 20, washers 19, and a nut 21, and nose rests 12. GNB 200 attaches to pierced nose bridge stud 24 by means of a flexible elastomeric C-clip fixedly positioned to one distal end of flexible rubber clip 14.

FIG. 6 is a top perspective view of the GNB 200 design, an alternate embodiment of the present invention, for attachment to pierced nose bridge stud 24. Short bridge 25 contains two distal ends and a center point for attachment to lens 11. Flexible rubber C-clip 14 is fixedly attached to one distal end of short bridge 25. One distal end of each flexible rubber C-clip 14 is "C" shaped for attachment to pierced nose bridge stud 24. Short bridge 25 attaches to lens 11 via C-clip attach assembly 22, which consists of a threaded bolt, two washers 19, and a nut 21, and the other distal end of each short bridge 25, bridge extension arms 18, and accepts each nose rest 12. Also shown is nose stud 23, which holds pierced nose bridge stud 24 in place on user.

FIG. 7 is a top view of the GNB 200 design, an alternate embodiment of the present invention, for attachment to pierced nose bridge stud 24. Short bridge arm 25 contains two distal ends and a center point to attachment to lens 11. Flexible rubber C-clip 14 is fixedly attached to one distal end of short bridge 25. One distal end of each flexible rubber C-clip 14 is "C" shaped for attachment to pierced nose bridge stud 24, which consists of threaded bolt, two washers 19, and a nut 21, and the other distal end of each short bridge 25, bridge extension arms 18, accepts each nose rest 12. Also shown is nose stud screw 23, which holds pierced nose bridge stud 24 in place on user. It should be noted that C-clip attach assembly 22 could easily be replaced with another attachment mechanism, such as a rivet, compression clip, etc. in attaching each lens 11.

FIG. 8 is a detailed close top view of the GNB 200 design, an alternate embodiment of the present invention, for attachment to pierced nose bridge stud 24. Each lens 11 attaches to each short bridge 25 by means of C-clip assembly 22. Flexible rubber C-clip 14 is fixedly attached to one distal end of short bridge 25 and nose rest 12 is attached to bridge extension arms 18 of short bridge 25. Flexible rubber C-clip 14 is "C" shaped for attachment to pierced nose bridge stud 24. Nose stud screw 23 hold holds pierced nose bridge stud 24 in place on a user. It should be noted that C-clip attach assembly 22 could easily be replaced with another design mechanism, such as a rivet, compression clip, etc. in attaching each lens 11.

FIG. 9 is an illustrative view of the GCES 300 design, an alternate embodiment of the GES 100 design, shown in use and attached to eyebrow studs 13, which are closer to the center face. In this glass to close eyebrow stud (GCES 300) design, all parts are common to GES 100 design shown previously. GCES 300 is designed for application where eyebrow studs 13 have been moved to the nose bridge area of a user. One important aspect of this alternate embodiment is that all parts are a subset of GES 100 design. Each lens 11 and metal arm 15 is attached to bridge 10 via a screw 20, washers 19, and nut 21 (or other means). Nose rests 12 are attached to leg extension of bridge 10 and supply comfort in user wear. It should be noted that the attachment by means other than a screw 20/nut 21 combination. For example, a rivet or other means could accomplish the same functional result. Flexible rubber clip insert 14 has an elastomeric C-shaped tip fixedly attached to one distal end for attachment to eyebrow stud 13. Further detail will be illustrated in FIG. 10. It should be noted that although FIG. 9 shows attachment to an eyebrow stud 13, this design could easily attach to a nose stud.

FIG. 10 is a top view of the GCES 300 design, alternate embodiment of the GES 100 design for attachment to dual eyebrow studs which are closer to the center face. In this glass to close eyebrow stud (GCES 300) design, many parts are common to GES 100 design shown previously. GCED 300 is designed for application where eyebrow studs 13 have been moved to the nose bridge area of a user. One important aspect of this alternate embodiment is that all parts are a subset of GES 100 design. Each lens 11 and metal arm 15 is attached to bridge 10 via a screw 20, washers 19, and nut 21 (or other means). Nose rests 12 are attached to bridge extension arms 18 of bridge 10 and supply comfort to user wear. It should be notes that the attachment of metal arm 15 and bridge 10 to lens 11 could be accomplished by means other than a screw 20/nut 21 combination. For example, a rivet or other means could accomplish the same functional result. Flexible rubber clip insert 14 has an elastomeric C-shaped tip fixedly attached to one distal end for attachment to eyebrow stud 13.
